## BY ORDER OF THE COMMANDER AIR MOBILITY COMMAND

## AIR MOBILITY COMMAND PAMPHLET 24-2 VOLUME 4, ADDENDUM C



21 NOVEMBER 2011

**Transportation** 

CIVIL RESERVE AIR FLEET LOAD PLANNING – BOEING (McDonnell-Douglas) MD-11 Series

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This pamphlet series is intended as a load planning guide and provides the basic information, data, and technical specifications needed in order for planners (both long range and individual movement) to load plan aircraft in the Civil Reserve Air Fleet (CRAF). Equipment and methods listed are compatible with all CRAF aircraft and cargo areas discussed. It must be noted that, unlike military cargo aircraft, civilian airframes are not standardized, and can vary widely, even within each carrier's fleet. Final approval, therefore, ultimately rests with the individual contractor providing airlift services to the DOD.

This pamphlet series enables application of DTR 4500.9-R, Defense Transportation Regulation – Part III Mobility, Appendix V, Aircraft Load Planning and Documentation; as well as AMCI 10-402, Civil Reserve Air Fleet (CRAF). The guidance contained herein is applicable to all USAF, AFRC, ANG and DOD agencies whenever they are charged with using the CRAF assets contained herein, in accordance with DOD, inter-service, and/or MAJCOM agreements.

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# **SUMMARY OF CHANGES**

# This document is substantially revised and must be completely reviewed. Series has been renumbered, reorganized, and data added.

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## Chapter 1

#### **GENERAL INFORMATION**

- **1.1. Purpose.** This pamphlet series is non-directive in nature. It provides the basic information, data, and technical specifications needed in order for planners to more efficiently and effectively load plan aircraft in the CRAF.
- 1.2. Scope. CRAF aircraft specifications listed herein are current as of the date of this printing. Equipment and methods listed are compatible with all CRAF aircraft and cargo areas discussed. It must be noted that, unlike military cargo aircraft, civilian airframes are not standardized, and can vary widely, even within each carrier's fleet. Final approval, therefore, ultimately rests with the individual contractor providing airlift services to the DOD.
- **1.2.1. Volume 4, Boeing (McDonnell Douglas).** AMCPAM 24-2 Volume 4 deals specifically with aircraft originally manufactured by McDonnell Douglas Corporation. McDonnell Douglas Corp. first formed in 1967 after the Douglas Co. (founded 1920) and McDonnell Aircraft Corp. (originating in 1928) merged. Through the last merger into the Boeing Company in 1997, the Boeing Company has melded the companies founded by aerospace pioneers William Boeing, Donald Douglas, James McDonnell, James "Dutch" Kindelberger, and Howard Hughes Jr. As of the date of this publication, the Boeing Company has produced almost 17,000 commercial jet aircraft alone, with over 12,100 still in service.
- **1.3. Arrangement.** This pamphlet series is designed for easy reference and access to the most commonly needed information for planning purposes. Essentially, Volume 1 will contain all information common to the entire CRAF program and most, if not all, carriers. Volumes 2 through 5 will contain information specific to a particular manufacturer's airframes, with each sub-volume addendum addressing a different series or type. Each can be referenced separately from another; however, each addendum needs to be used in conjunction with Volume 1.
- **1.3.1. Volume 4, Boeing (McDonnell Douglas) Addenda.** Volume 4 is not separated from each subsequent addendum, but is published as a "cover" document along with and as an introduction for each addendum. The same information for Volume 4 essentially gets republished--unchanged with each Boeing (McDonnell Douglas) model's addendum.
- **1.3.2. Volume 4, Boeing (McDonnell Douglas) Quick Reference Tables.** All chapter descriptions for various models are designed to be used in conjunction with Chapter 2 Quick Reference Tables. The information in the Quick Reference Tables will generally not be restated in the expanded chapters as they are meant primarily for pictorial figures.
- **1.4. Supplements.** Changes or supplements to this pamphlet by agencies, other than AMC, are prohibited. This does not preclude its use as a reference document for preparation of intraagency instructional directives.
- **1.5. Acronyms.** An explanation of the acronyms used in this pamphlet is in AMCPAM 24-2, Volume 1, Attachment 1.

**1.6. Copyrights.** All drawings and diagrams, unless otherwise noted, are derived from copyright © or copyrightable material of The Boeing Company. Used by permission. All rights reserved. Material used in contour charts are © 2010-2011 International Air Transport Association. All rights reserved. Reproduced under license by **USAF**. (NOTE: The information contained in the IATA ULD Technical Manual is subject to constant review in light of changing government requirements and regulations. Although every effort has been made to ensure accuracy, neither IATA nor USAF shall be held responsible for loss or damages caused by errors, omissions, misprints or misinterpretation of the contents hereof. Furthermore, IATA and USAF expressly disclaim any and all liability to any person or entity in respect of anything done or omitted, by any such person or entity in reliance on the contents of that publication or of extracts reproduced herein.

## 1.7. Description. Addendum C. Boeing (McDonnell Douglas) MD-11 Series.

The MD-11 Series aircraft are wide body, three engine aircraft, designed for medium to long range. The MD-11 was designed as follow-on to the DC-10, and featured a longer (by about 18.6 feet) fuselage, and redesigned wings from its predecessor. Additionally, the MD-11 Series incorporated advances in aerodynamics, propulsion, aircraft systems, and cockpit avionics. This increased performance, reduced operating costs, and reduced the crew from three (on a DC-10) to two. Production of the MD-11 Series lasted from 1988 to 2001, with 200 models delivered.

There were four basic models of the MD-11 Series, with an additional Extended Range (the MD-11ER) all-passenger variant.

The **MD-11** is the basic, all-passenger model. The MD-11 launched the Series with its first flight on January 1990. It was type-certified in November 1990, and was the most popular model of the series, with 131 aircraft manufactured and delivered.

The **MD-11F** ("F" for freighter), was offered up to customers at the same time as the MD-11, and shares the same type-certification date. This all-cargo version is the second-most produced in the MD-11 Series, with 53 originally made, and were the last aircraft manufactured in the Series. Additionally, with the introduction of the MD-11 Boeing Converted Freighter (BCF) program, it is unknown how many MD-11 passenger or combi airplanes will be converted to freighters.

**MD-11C** ("C" for Combi). The MD-11C was yet another option offered when the MD-11 program launched. The Combi design allowed the MD-11C to carry both passengers and cargo at the same time in the main compartment. Since it had this dual-feature, the MD-11C's main compartment cargo door was placed in the rear fuselage, making it different from the MD-11F and MD-11CF models. With only five built, it is believed that all have been retired from service.

**MD-11CF** ("CF" standing for Convertible Freighter). The MD-11CF came in the early 90's and offered the "best of both worlds" to customers, providing versatility in being able to operate in all-passenger or all-freighter configurations. Only six were manufactured, and it looks like almost all remaining in service have been converted to all-freighter usage.

AMCPAM 24-2, Volume 4, Addendum C will focus primarily on the: **MD-11** 

**MD-11F** 

## Chapter 2

## **QUICK REFERENCE TABLES**

- **2.1. Ranges.** Most numbers are shown as a range, due to representing all-passenger to all-freight versions OR due to different modifications within a series/type. Also, within a series, several different engines/weight classes may exist.
- **2.2. Pallets.** Unless otherwise noted, pallet information is based on the civilian pallet IATA code PAG- / P1P- type LD7 which measures  $88" \times 125"$ .
- 2.3. Table Legends.
- **2.3.1. Compartments.** Unless otherwise noted, compartments are: M=Main/Upper; F=Forward/Lower Lobe; A=Aft/Lower Lobe; B=Bulk/Lower Lobe.
- **2.3.2. "X".** An "X" represents the information does NOT apply for that series/type (ex: an all-passenger version would have an "X" by Main Compartment Door)
- **2.3.3. Question Mark "?".** A "?" represents that the information should apply, but no information exists in the manufacturer's technical manuals.
- **2.3.4. Exclamation Point "!".** An "!" represents information that should apply, but has been derived from a reliable, but non-manufacturer source.
- **2.4. After-Market Conversions.** As a reminder, individual airlines may have converted an airframe apart from the manufacturer's original specifications. These tables and the charts in the following chapters do not account for this.
- **2.5. Tables.** The following tables (Tables 2.1 through 2.6) will vary with each AMCPAM 24-2, Volume 4 Addendum.

# 2.6. Tables. Addendum C. Boeing (McDonnell Douglas) MD-11 Series.

Table 2.1. Cargo Planning.

Aircraft Type	Pallets (88"×125")	m ACL (S Length (N	*		Ferry Range w/		
	Max Ht	ACL (NM)	2000	2500	3000	3500	No Cargo (NM)
MD-11	M= X, F= 6, A= 0/4, B= 0	4,650 – 5,000	58	58	58	58	7,500
MD-11F	M= 26, F= 6, A= 0/4, B= 0	1,400	88	86.75	86	85.5	8,050

Table 2.2. Passenger Planning.

Aircraft Type	Standard Seating	Max Seats	Range w/ Max Troops	Maximum Troops per Leg Length (NM)			
		(One Class)	(NM)	2,000	2,500	3,000	3,500
MD-11	323	410	5,800	410	410	410	410
MD-11F	X	X	X	X	X	X	X

Table 2.3. Door Clearances/Sizes.

Aircraft Type	Door H (in inch	eight fro es)	m ground	d	Door Size (W×H) (in inches)				
	Front/ Side Pax	Main/ Upper Deck	Lower Lobe FWD	Lower Lobe AFT	Bulk Lobe	Main Deck	Lower Lobe FWD	Lower Lobe AFT	Bulk Lobe
MD-11	X	X	110 to 123	106 to 117	123 to 136	X	104 × 66	70 × 66 Or 104 × 66	30 × 36
MD-11F	188 to 205	188 to 205	110 to 123	106 to 117	123 to 136	140 × 102	104 × 66	70 × 66 Or 104 × 66	30 × 36

**Table 2.4. Compartment Dimensions.** 

Aircraft Type	_	rtment Dimens H) (in inches)	Compartment Weight limit (lbs)					
	Main/ Upper Deck	Lower Lobe FWD	Lower Lobe AFT	Bulk Lobe	Main/ Upper Deck	Lower Lobe FWD	Lower Lobe AFT	Bulk Lobe
MD-11	X	? × 125.5(@fl) 164 × 66	? × 125.5(@fl) 164 × 66	?	X	?	?	?
MD-11F	1732 × 224 × 97.5	? × 125.5(@fl) 164 × 66	? × 125.5(@fl) 164 × 66	?	?	?	?	?

**Table 2.5. Weight Information.** 

Aircraft Type	Maximum Design Weight (lbs)									
	Ramp/ Taxi (MTW)	T/O (MTW)	Land (MLW)	Zero Fuel (MZFW)	Oper Empty (OEW)	Max Payload	Max Cargo Vol. (FT <sup>3</sup> )			
MD-11	605,500	602,500	430,000	400,000	283,975	116,025	5,566			
MD-11F	605,500	602,500	471,500	451,300	248,567	202,733	21,530			

Table 2.6. Airfield Suitability Information.

Aircraft Type	Max Usable	T/O Min	LND Min	Parking Ramp	Electrical (Ground	Air (Starting)	Gear Type
	Fuel (US Gal)	RWY at MTW (FT)	RWY at MLW (FT)	Footprint (L×W)	Op's & Maintenance)	(SL, Std Day)	New FAA / USAF
MD-11	38,615	9,700 – 9,800	7,500	202' 2" x 170' 6"	115V 3-ph, 400 Hz 90 KVA	3" Max- 67.7 PSIA 260° C	2D•D1/DT / T-TA
MD-11F	38,615	9,700 – 9,800	7,900	202' 2" x 170' 6"	115V 3-ph, 400 Hz 90 KVA	3" Max- 67.7 PSIA 260° C	2D/D1/DT / T-TA

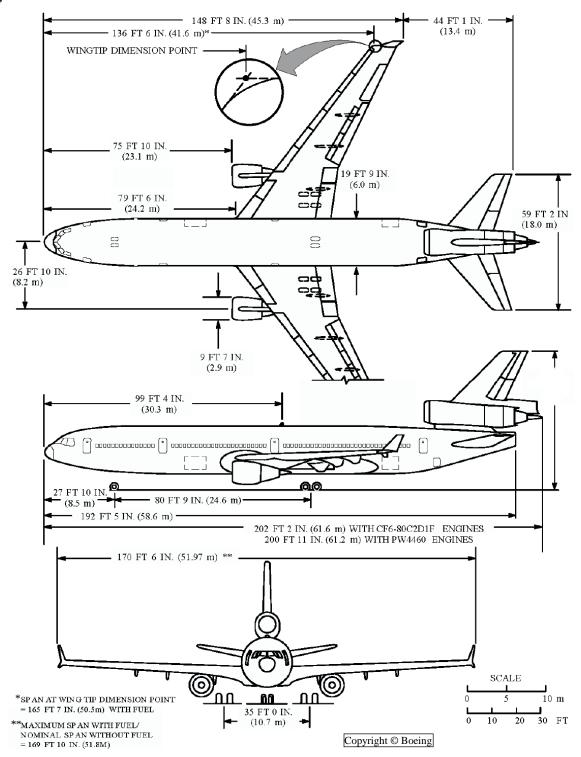
# **Chapter 3**

#### **MD-11**

## 3.1. DIMENSIONS.

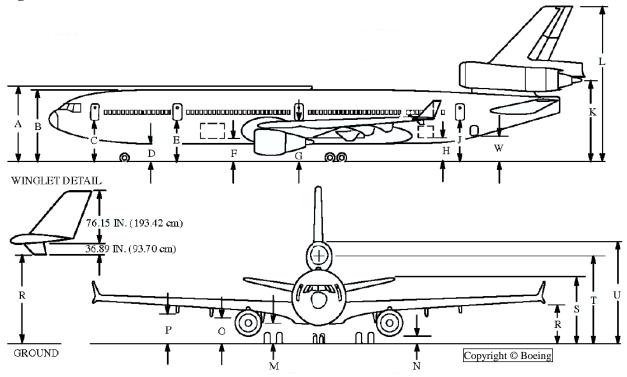
## 3.1.1. General Dimensions.

Figure 3.1. General Dimensions MD-11.



# 3.1.2. Ground Clearance.

Figure 3.2. Ground Clearance MD-11.



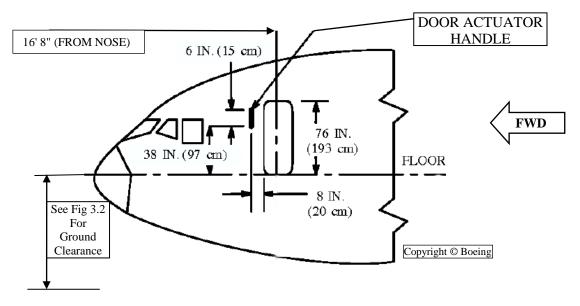
Vertical Clearances			
DOOR		Min	Max
	A	28' 7"	29' 2"
	В	27' 1"	28' 6"
Pax/Crew	C	15' 9"	17' 5"
	D	7' 4"	8' 9"
	E	15' 8"	16' 11"
FWD	F	9' 2"	10' 3"
	G	15' 7"	16' 3"
AFT	H	8' 10"	9' 9"
	J	15' 4"	16' 3"
	K	29' 5"	30' 9"
	L	57' 6"	58' 10"
	M	7' 10"	8' 5"
	N	3' 2"	4' 5"
	0	9' 8"	10' 5"
	P	10' 8"	11' 7"
	R	12' 4"	13' 4"
	S	23' 4"	25' 7"
	T	32' 7"	33' 6"
	U	37' 3"	38' 2"
BULK	W	10' 3"	11' 4"

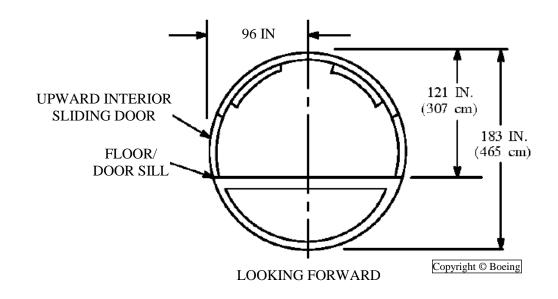
## 3.2. COMPARTMENT CONFIGURATIONS.

## 3.2.1. MAIN/PASSENGER COMPARTMENT.

## 3.2.1.1. Pax/Crew Door.

Figure 3.3. Pax/Crew Door MD-11.



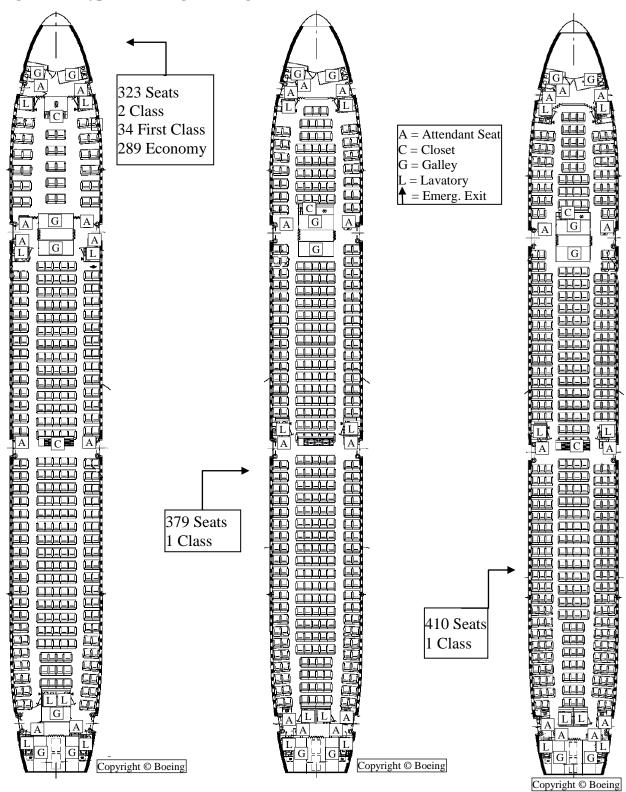


## 3.2.1.2. Main Door.

N/A this model

## 3.2.1.3. Compartment Dimensions.

Figure 3.4. Typical Passenger Configurations MD-11.

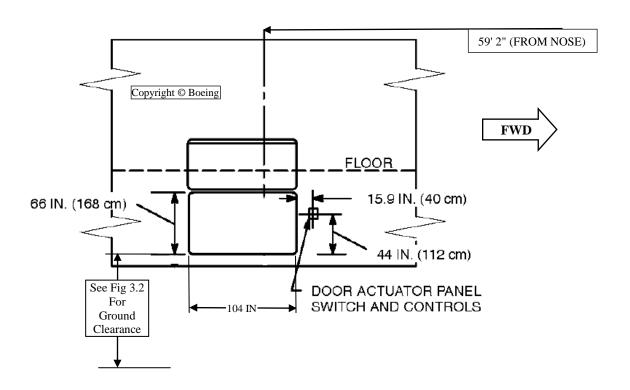


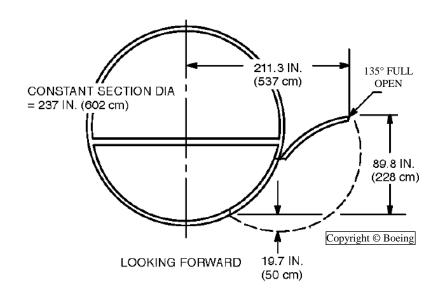
3.2.1.4. Pallets. N/A this model

## 3.2.2. FORWARD COMPARTMENT.

#### 3.2.2.1. Door.

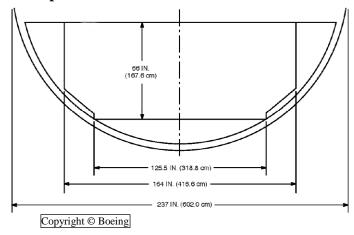
Figure 3.5. Forward Compartment Door MD-11.





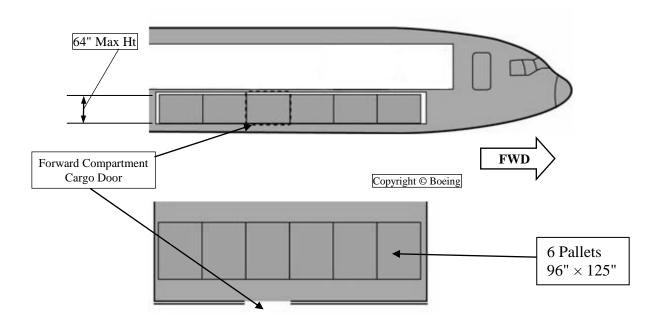
# 3.2.2.2. Compartment Dimensions.

Figure 3.6. Forward Compartment Dimensions MD-11.



## 3.2.2.3. Pallets.

Figure 3.7. Forward Compartment Cargo Configurations MD-11.



## 3.2.3. AFT COMPARTMENT.

#### 3.2.3.1. Door.

(Note: Small Aft Door standard. Large Aft Door installed as an option.)

Figure 3.8. Aft Compartment Door (Small) MD-11.

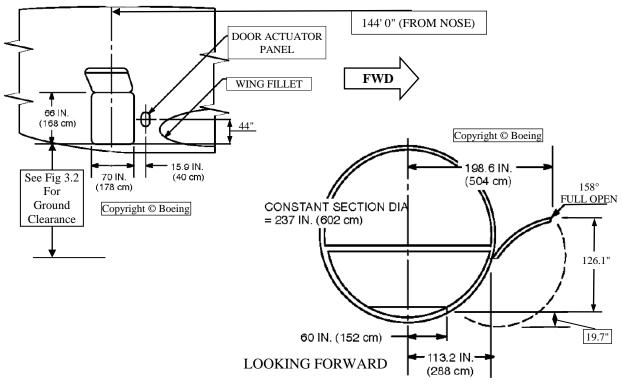
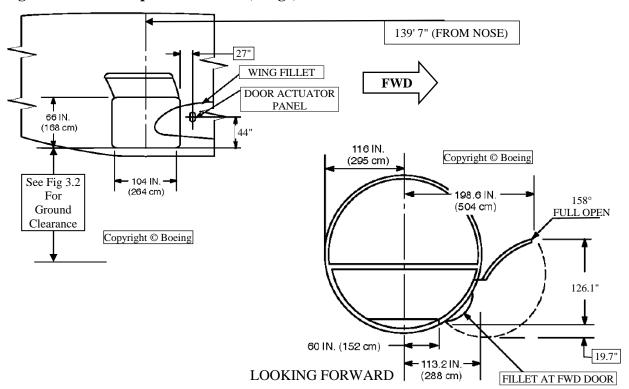


Figure 3.9. Aft Compartment Door (Large) MD-11.

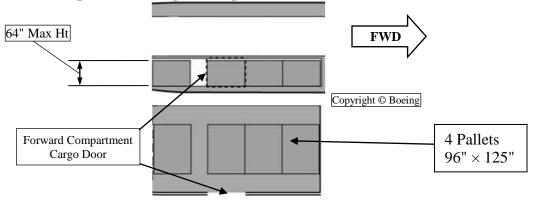


## 3.2.3.2. Compartment Dimensions.

Same as for Forward Compt MD-11. See: Fig 3.6. Forward Compt Dim's MD-11.

**3.2.3.3. Pallets.** (Note: Only if large aft compartment cargo door is installed.)

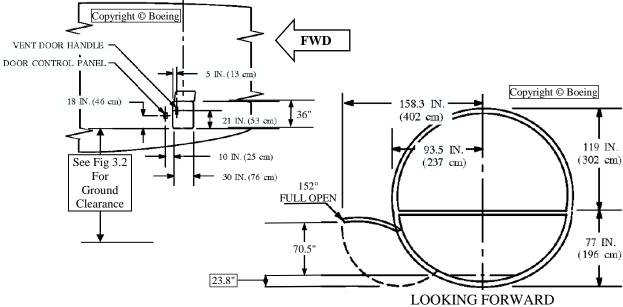
Figure 3.10. Aft Compartment Cargo Configurations MD-11.



## 3.2.4. BULK COMPARTMENT.

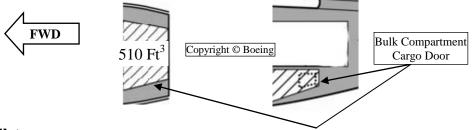
#### 3.2.4.1. Door.

Figure 3.11. Bulk Compartment Door MD-11.



## 3.2.4.2. Compartment Dimensions.

Figure 3.12. Bulk Compartment Dimensions MD-11.



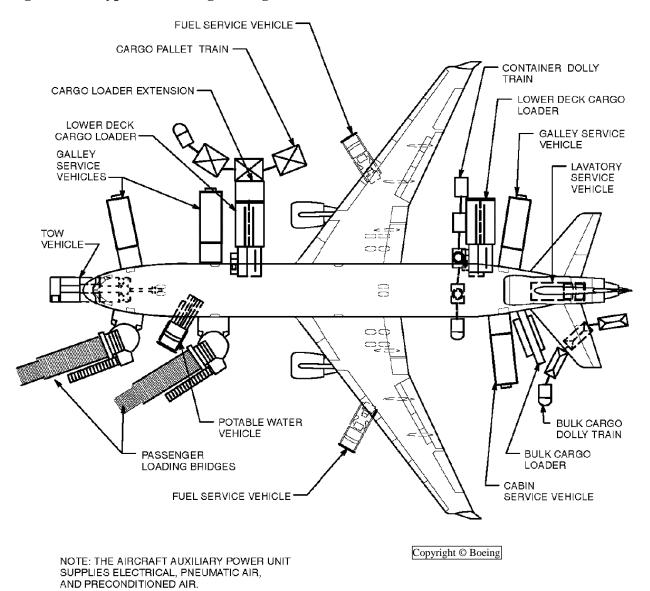
## 3.2.4.3. Pallets.

88" x 125" pallets cannot be loaded in this compartment.

## 3.3. SERVICING DIAGRAMS.

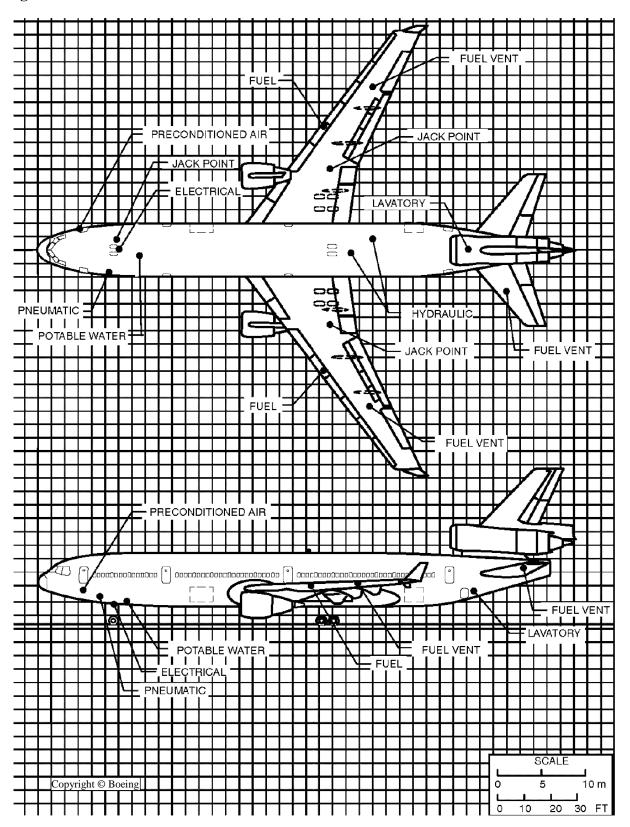
## 3.3.1. Servicing.

Figure 3.13. Typical Servicing Arrangement MD-11.



## 3.3.2. Ground Connections.

Figure 3.14. Ground Service Connections MD-11.

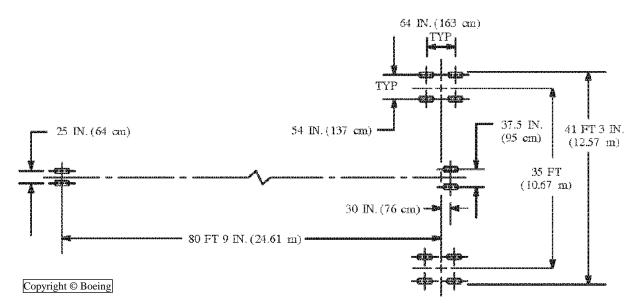


# 3.4. AIRFIELD SUITABILITY.

# 3.4.1. Landing Gear Footprint.

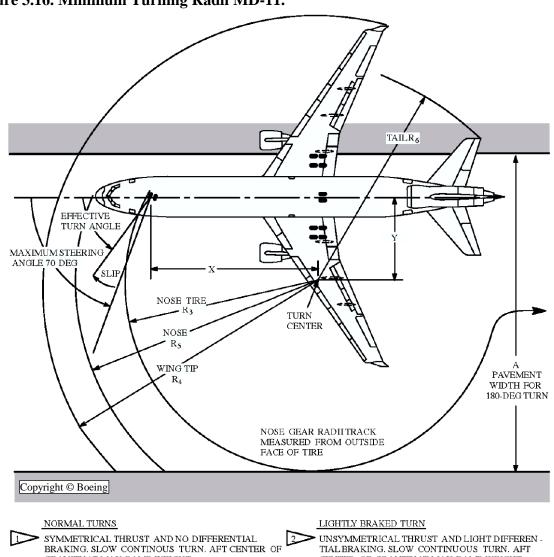
Figure 3.15. Landing Gear Footprint MD-11.

Max Taxi Wt.	633,000 lb
	(287,129 kg)
Nose Gear Tire Size	40 x 15.5 - 16
Nose Gear Tire Press.	180 psi
	$(12.7 \text{ kg/cm}^2)$
Main Gear Tire Size	H54 x 21.0 - 24
Main Gear Tire	180 psi
Press.	180 psi (12.7 kg/cm <sup>2</sup> )



# 3.4.2. Minimum Turning Radii.

Figure 3.16. Minimum Turning Radii MD-11.



TIALBRAKING. SLOW CONTINUOUS TURN. AFT CENTER OF GRAVITY AT MAX RAMP WEIGHT GRAVITY AT MAX RAMP WEIGHT

MINIMUM RECOMMENDED RADIUS TO AVOID EXCESSIVE TIRE WEAR. LIMITED BY 8-DEG MAIN GEAR TIRE SCRUB

Type of Turn	Effective Turn Angle	Tire Slip Angle	X	Y	A	R3	R4	R5	R6
	60.8°	9.2°	81.2'	45.3'	160.6'	94.7'	136.4'	118.1'	111.9'
	00.0	7.2	(24.7m)	(13.8m)	(49.0m)	(28.9m)	(41.6m)	(36.0m)	(34.1m)
2	72.0°	-2.0°	81.6'	26.5'	134.6'	87.5'	118.5'	112.6'	100.0'
2>	72.0	-2.0	(24.9m)	(8.1m)	(41.0m)	(26.7m)	(36.1m)	(34.3m)	(30.5m)
3>			81.2'	42.1'	155.8'	93.1'	133.4'	116.9'	109.8'
			(24.7m)	(12.8m)	(47.5m)	(28.4m)	(40.7m)	(35.6m)	(33.5m)

# 3.4.3. Parking Footprint.

No manufacturer diagrams available.

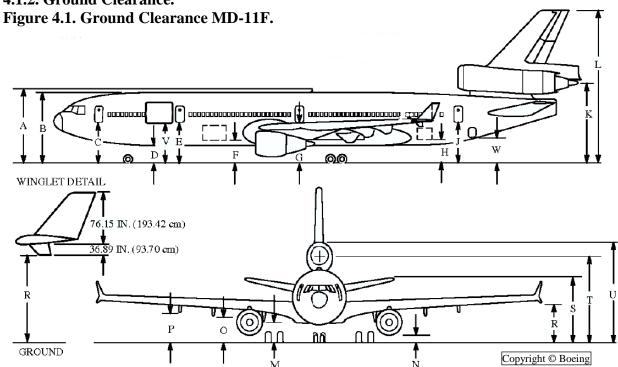
## Chapter 4 MD-11F

## 4.1. DIMENSIONS.

## 4.1.1. General Dimensions.

Same as for MD-11. See: Figure 3.1. General Dimensions MD-11.

## 4.1.2. Ground Clearance.



Vertical Clearances			
DOOR		Min	Max
	A	28' 7"	29' 2"
	В	27' 1"	28' 6"
Pax/Crew	C	15' 9"	17' 5"
	D	7' 4"	8' 9"
	E	15' 8"	16' 11"
FWD	F	9' 2"	10' 3"
	G	15' 7"	16' 3"
AFT	H	8' 10"	9' 9"
	J	15' 4"	16' 3"
	K	29' 5"	30' 9"
	L	57' 6"	58' 10"
	M	7' 10"	8' 5"
	N	3' 2"	4' 5"
	0	9' 8"	10' 5"
	P	10' 8"	11' 7"
	R	12' 4"	13' 4"
	S	23' 4"	25' 7"
	T	32' 7"	33' 6"
	U	37' 3"	38' 2"
MAIN	V	15' 8"	17' 1"
BULK	W	10' 3"	11' 4"

## 4.2. COMPARTMENT CONFIGURATIONS.

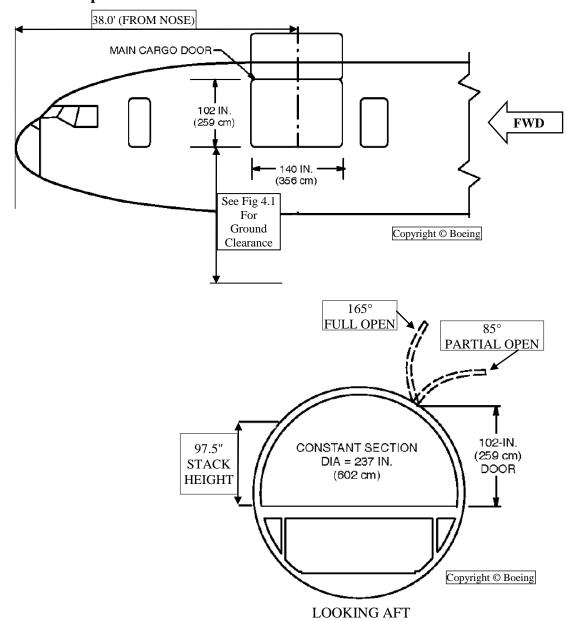
## 4.2.1. MAIN/PASSENGER COMPARTMENT.

## **4.2.1.1.** Pax/Crew Door.

Same as for MD-11. See: Figure 3.3. Pax/Crew Door MD-11.

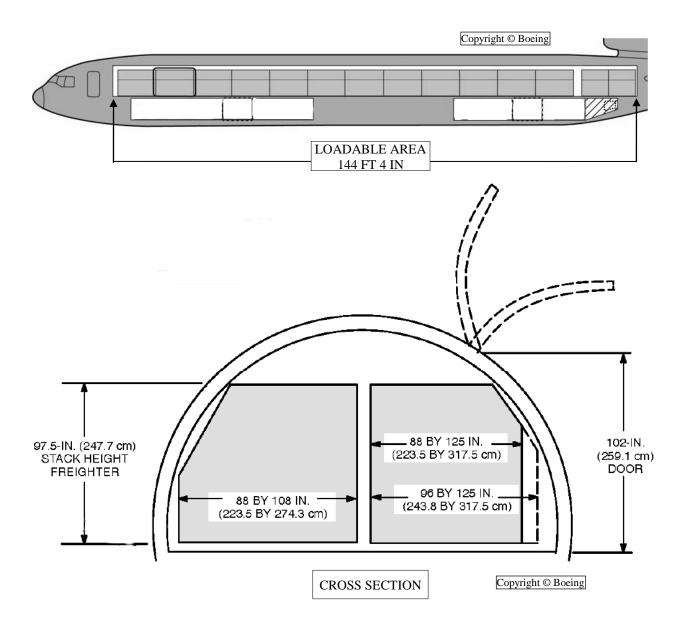
## 4.2.1.2. Main Door.

Figure 4.2. Main Compartment Door MD-11F.



# 4.2.1.3. Compartment Dimensions.

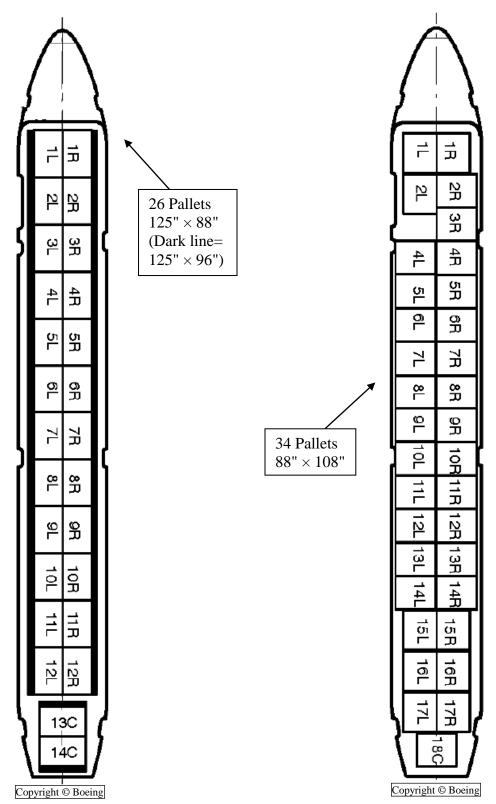
Figure 4.3. Main Compartment Dimensions MD-11F.



## 4.2.1.4. Pallets.

**NOTE:** See <u>Attachment 1</u> for contour guide for the build-up of cargo.

Figure 4.4. Main Compartment Cargo Configurations MD-11F.



#### 4.2.2. FORWARD COMPARTMENT.

#### 4.2.2.1. Door.

Same as for MD-11. See: Figure 3.5. Forward Compartment Door MD-11.

#### **4.2.2.2.** Compartment Dimensions.

Same as for MD-11. See: Figure 3.6. Forward Compartment Dimensions MD-11.

#### 4.2.2.3. Pallets.

Same as for MD-11. See: Fig 3.7. Forward Compartment Cargo Config's MD-11.

#### 4.2.3. AFT COMPARTMENT.

#### 4.2.3.1. Door.

(Note: Small Aft Door standard. Large Aft Door installed as an option.)

Same as for MD-11. See:

Figure 3.8. Aft Compartment Door (Small) MD-11.

#### OR

Figure 3.9. Aft Compartment Door (Large) MD-11.

## 4.2.3.2. Compartment Dimensions.

Same as for Forward Compt MD-11. See: Fig 3.6. Forward Compt Dim's MD-11.

#### 4.2.3.3. Pallets.

(Note: Only if large aft compartment cargo door is installed.)

Same as for MD-11. See: Figure 3.10. Aft Compartment Cargo Config's MD-11.

## 4.2.4. BULK COMPARTMENT.

#### 4.2.4.1. Door.

Same as for MD-11. See: Figure 3.11. Bulk Compartment Door MD-11.

## **4.2.4.2.** Compartment Dimensions.

Same as for MD-11. See: Figure 3.12. Bulk Compartment Dimensions MD-11.

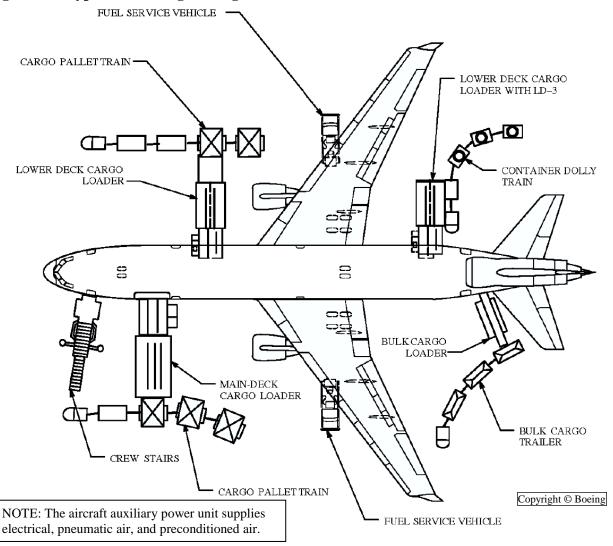
#### 4.2.4.3. Pallets.

88" x 125" pallets cannot be loaded in this compartment.

## 4.3. SERVICING DIAGRAMS.

## 4.3.1. Servicing.

Figure 4.5. Typical Servicing Arrangement MD-11F.



## 4.3.2. Ground Connections.

Same as for MD-11. See: Figure 3.14. Ground Service Connections MD-11.

## 4.4. AIRFIELD SUITABILITY.

## 4.4.1. Landing Gear Footprint.

Same as for MD-11. See: Figure 3.15. Landing Gear Footprint MD-11.

## 4.4.2. Minimum Turning Radii.

Same as for MD-11. See: Figure 3.16. Minimum Turning Radii MD-11.

**4.4.3. Parking Footprint.** No manufacturer diagrams available.

FREDERICK H. MARTIN, Brig Gen, USAF Director of Operations

#### **Attachment 1**

#### GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

## References

#### **Department of Defense / Unified Combatant Commands**

DTR 4500.9-R, Defense Transportation Regulation – Part III Mobility, September 2007

DTR 4500.9-R, <u>Appendix J</u> – Hazardous Materials (HAZMAT) Certification and Mobility Procedures, September 2007

DTR 4500.9-R, <u>Appendix K</u> – Hazardous Materials (HAZMAT) Special Permits (SP), April 2011

DTR 4500.9-R, Appendix V – Aircraft Load Planning and Documentation, April 2011

DTR 4500.9-R, <u>Appendix BB</u>— Procedures for Transporting Weapons, Ammunition and Hazardous Materials (HAZMAT) Aboard Commercial Aircraft in Scheduled Service and Department of Defense (DOD) – Owned or Controlled Aircraft, April 2011

#### **Air Force**

AFDD 2-6, Air Mobility Operations, 1 March 2006

<u>AFMAN24-204(I)</u>, *Preparing Hazardous Materials for Military Air Shipments*, 1 September 2009

AFPAM 10-1403, Air Mobility Planning Factors, 18 December 2003

AMCI 10-202V4, CL-1, Expeditionary Air Mobility Support Operations Checklist, 2 May 2006

AMCI 10-402, Civil Reserve Air Fleet (CRAF), 27 April 2010

AMCI 24-201, Commercial Airlift Management - Civil Air Carriers,, 1 July 2004

## **Other Agencies**

ATTLA, MIL-HDBK-1791, Designing for Internal Aerial Delivery in Fixed Wing Aircraft, 14 February 1997

IATA, ULD Technical Manual (ULD)

Airbus, 198 Van Buren Street Suite 300 Herndon, VA 20170

Boeing, P. O. Box 3707 Seattle, Washington 98124

#### Prescribed Forms

No Forms or IMT's prescribed by this publication

#### Adopted Forms

AF Form 847, Recommendation for Change of Publication

DD Form 2130-5, DC 10-10/30CF Load Plan

DD Form 2130-8, DC 8-50 Series F/CF Load Plan

DD Form 2130-9, DC 8-61/71-63/73F/CF Load Plan

DD Form 2130-10, DC 8-62CF Load Plan

DD Form 2130-11, B707-300C Load Plan

DD Form 2130-12, B747-100F/200C/200F Load Plan

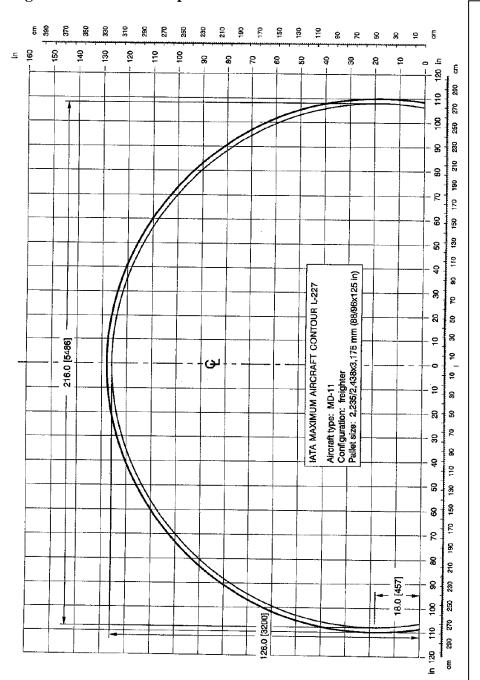
DD Form 2130C, Aircraft Load Plan Continuation

<u>JP 3-17</u>, Joint Doctrine and Joint Tactics, Techniques, and Procedures for Air Mobility Operations

#### **Attachment 2**

#### MAIN COMPARTMENT CONTOUR CHART MD-11F

Figure A2.1. Main Compartment Contour Chart MD-11F



Shows inside dimensions where cargo compartment has a constant cross-section (internal contour measured perpendicular to the aircraft length - excludes any tapered section of the fuselage).

Notes:

Minimum 2 inches of clearance must exist between aircraft contour and maximum payload contour (represented by inner solid line of 6

All horizontal dimensions are measured left or right of aircraft centerline (CL). the contour drawing).

All vertical dimensions are measured from the top of the conveyor plane.  $\mathfrak{S} + \mathfrak{S} \mathfrak{S}$ 

Reference number of L227 for this contour assigned by IATA for easy identification.

The specifications of airframe manufacturer and/or carrier will ALWAYS take precedence over this chart.